Af 2684/#16 Appeal Brief 2/8/03 L.J.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Attorney Docket No.: **JA919990082US1**

In re Application of: §

HORIKOSHI ET AL. §

Serial No.: **09/625,762** §

Filed: **JULY 26, 2000** §

For: **METHOD AND COMPUTER FOR REMOTE COMMUNICATION WHILE OPERATING IN A POWER-SAVING MODE** §

Examiner: **HARRY, A.**

Art Unit: **2684**

APPEAL BRIEF

Commissioner for Patents
Washington, D.C. 20231

Sir:

This Brief is submitted in triplicate in support of the Appeal in the above-identified application.

CERTIFICATE OF MAILING
37 CFR 1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as First-Class Mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on the date below.

1-21-03
Date

Signature of Veronica Sotelo

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REAL PARTY IN INTEREST

The present application is assigned to International Business Machines Corporation, the real party of interest.

RELATED APPEALS AND INTERFERENCES

No related appeal is presently pending.

STATUS OF THE CLAIMS

Claims 1-7, 9-11 and 14-19 stand finally rejected by the Examiner as noted in the Advisory Action dated December 4, 2002.

STATUS OF AMENDMENTS

No amendment was submitted subsequent to the Final Office Action dated September 27, 2002.

SUMMARY OF THE INVENTION

Notebook computers typically have software utilities for reducing power consumptions. A common method of reducing power consumption of a notebook computer is to allow the notebook computer to enter a power-saving mode when no user input has been detected by the notebook computer after a predetermined amount of time. During the power-saving mode, the main processor of the notebook computer enters a power-down state during which the main processor ceases executing program code but can be revived by a triggering event such as an interrupt caused by a user pressing a keyboard key on the notebook computer.

Wireless communications to a notebook computer can be accomplished by using radio frequency channels to transmit and receive information. Typically, the operating system and an application software within a notebook computer are required to be active during wireless communications. However, when a notebook computer is in a power-saving mode, a communication device within the notebook computer that is required for communication may be in an inactive state or the processor may be in a state that is incapable of handling

communications. Thus, wireless communications are inhibited for a notebook computer that is operating in a power-saving mode. Consequently, it is desirable to provide a method for a notebook computer to receive a wireless signal when the notebook computer is operating under a power-saving mode.

In accordance with a preferred embodiment of the present invention, a notebook computer is set to detect a wireless signal representing a bit sequence when the notebook computer is operating under a power-saving mode, as shown in blocks **107** and **113** of Figure **3**. The wireless signal is targeted for the notebook computer, and the bit sequence in the wireless signal includes a request for the notebook computer to exit the power-saving mode. In response to the wireless signal, the notebook computer exits the power-saving mode automatically, as depicted in block **117** of Figure **3**. Some or all of the bit sequence of the wireless signal are then regenerated within the notebook computer. Finally, the regenerated bit sequence of the wireless signal is stored in a memory device of the notebook computer after the notebook computer has exited the power-saving mode.

ISSUE

Is the Examiner's rejection of Claims 1-7, 9-11 and 14-19 under 35 U.S.C. § 103(a) as being unpatentable over *Connery et al.* (US 6,311,276) well-founded?

GROUPING OF THE CLAIMS

For purposes of this Appeal, Claims 1-4, 6-11 and 14-16 stand or fall together as Group I, and Claims 17-19 stand or fall together as Group II.

ARGUMENT

The Examiner's rejections of Claims 1-7, 9-11 and 14-19 are not well-founded and should be reversed.

I. *Connery* does not teach or suggest the claimed detecting step

Claim 1 (and similarly Claim 10) recites a step of "detecting within a computer a wireless signal representing a bit sequence when said computer is operating in a power-saving mode, wherein said wireless signal is targeted for said computer, wherein said bit sequence includes a request for said computer to exit said power-saving mode" (lines 3-6). Thus, the claimed detecting step is for detecting a wireless signal representing a bit sequence, and the bit sequence includes a request for the computer to exit a power-saving mode.

On page 4 of the Final Office Action, the Examiner asserts that the claimed detecting step is disclosed in col. 6, line 53 - col. 7, line 16 of *Connery*. In col. 6, line 53 - col. 7, line 16, *Connery* states:

> One embodiment of the invention utilizes a byte sequence illustrated in FIG. **4** (which may be located anywhere within a packet) with the following format following an Ethernet header **75**:
>
> ...
>
> Parameters are encoded in the Parameters field as needed for an individual command using a types, length, value format.

In general, *Connery* is related to an implementation of Wake On LAN (*i.e.*, wireline application) and not related to a wireless application. Specifically, as shown in the above-stated passage of *Connery*, there is no teaching or suggestion with regard to the claimed detecting step. Further, the bit format disclosed by *Connery* does not teach or suggest "said bit sequence includes a request for said computer to exit said power-saving mode," as claimed. Because the claimed invention recites novel features that are not taught or suggested in *Connery*, the § 103 rejection is improper.

II. *Connery* does not teach or suggest the claimed regenerating and storing steps

Claim 1 (and similarly Claim 10) recites a step of "regenerating some or all of said bit sequence of said wireless signal" (line 8) and a step of "storing said some or all of said bit sequence of said wireless signal in a memory after exiting said power-saving mode" (lines 9-10). Details of the above-mentioned steps are explained on page 15, lines 24-31 of the specification.

On page 4 of the Final Office Action, the Examiner asserts that the claimed regenerating and storing steps are disclosed in col. 5, lines 37-47 and in col. 5, lines 26-36 of *Connery*, respectively. The Examiner also reaffirms the above-mentioned position on page 2 of the Final Office Action. However, there are several problems with the Examiner's position. In the claimed invention, the regenerating step is followed by the storing step because the bit sequence has to be regenerated before the bit sequence can be stored in a memory. But if the Examiner's interpretation of *Connery*'s teachings were to be followed, then *Connery*'s storing step as disclosed in col. 5, lines 26-36 would come before *Connery*'s regenerating step as disclosed in col. 5, lines 37-47), which is contrary to the recited steps of the claimed invention.

Further, in col. 5, lines 26-36, *Connery* states:

> The secure Wake On LAN network interface card **31** allows the system to receive Wake On LAN packets across the medium **33**, and in response to issue signals to the power management circuitry **30**, which results in waking up the CPU, or otherwise bringing up the system to allow functions specified by the network management system to be performed. Thus, an information system department using the management station is able to do end node management, such as software updates, backups of data, and other system wide services in the network, even in the presence of sleeping green PCs.

But there is no teaching or suggestion from the above-stated passage with regard to the claimed storing step. Also, in col. 5, lines 37-47, *Connery* states:

> FIG. **2** also illustrates boot code memory **35** which is coupled to the system bus **26**. The power management circuitry **30**, in combination with the secure Wake On LAN network interface cards **31** in one embodiment are coupled with the boot code **35**. Thus, one command issued to the power management circuitry involves activating the boot code **35**, while by passing certain functions within the boot code such as password protection schemes which are incorporated into or initiated by, the boot code stored in the memory **35**.

But there is no teaching or suggestion from the above-stated passage with regard to the claimed regenerating step. Because the claimed invention recites novel features that are not taught or suggested in *Connery*, the § 103 rejection is improper.

III. *Connery* does not teach or suggest the claimed power saving mode selection means

Claim 17 recites "a power saving mode selection means for selectively entering and exiting a power-saving mode" (lines 3-4). On page 9 of the Final Office Action, the Examiner asserts that the claimed power saving mode selection means is disclosed in col. 5, lines 26-32 of *Connery*. In col. 5, lines 26-32, *Connery* states:

> The secure Wake On LAN network interface card **31** allows the system to receive Wake On LAN packets across the medium **33**, and in response to issue signals to the power management circuitry **30**, which results in waking up the CPU, or otherwise bringing up the system to allow functions specified by the network management system to be performed.

There is no teaching or suggestion from the above-stated passage of *Connery* regarding the claimed power saving mode selection mode means that can selectively entering and exiting a powering mode. Because the claimed invention recites novel features that are not taught or suggested in *Connery*, the § 103 rejection is improper.

CONCLUSION

For the reasons stated above, Appellants believe that the claimed invention clearly is patentably distinct over the cited references and that the rejections under 35 U.S.C. § 103 are not well-founded. Hence, Appellants respectfully urge the Board to reverse the Examiner's rejection.

Please charge the Deposit Account **50-0563** in the amount of $320.00 for submission of a Brief in support of Appeal. No additional fee or extension of time is believed to be required; however, in the event an additional fee or extension of time is required, please charge that fee or extension of time requested to the Deposit Account **50-0563**.

Respectfully submitted,

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APPENDIX

1. A method for receiving a wireless signal by a computer adapted to operate in a power-saving mode, said method comprising the steps of:

detecting within a computer a wireless signal representing a bit sequence when said computer is operating in a power-saving mode, wherein said wireless signal is targeted for said computer, wherein said bit sequence includes a request for said computer to exit said power-saving mode;

exiting said power-saving mode automatically in response to said wireless signal;

regenerating some or all of said bit sequence of said wireless signal; and

storing said some or all of said bit sequence of said wireless signal in a memory after exiting said power-saving mode.

2. The method of claim 1, further includes the steps of:

determining whether a wireless signal receiver device is installed and enabled by reading a plurality of status signals; and

exiting said power-saving mode only if said wireless signal receiver device is installed and enabled.

3. The method of claim 1, wherein said detecting further includes detecting a particular identification tag embedded in said bit sequence.

4. The method of claim 1, wherein wireless signal is transmitted through a radio frequency channel.

5. cancelled

6. The method of claim 1, wherein said bit sequence includes a request to continue execution of a program that is suspended while said computer is in said power-saving mode.

7. The method of claim 1, wherein said computer comprises a receiving means for detecting said wireless signal, and said computer further comprises a switch for maintaining power to said receiving means while operating in power-saving mode, and further comprising the step of:

setting said switch to maintain power to said receiving means prior to entering said power-saving mode.

8. cancelled

9. The method of claim 1, further includes the steps of:

processing information conveyed by said bit sequence; and

returning to said power-saving mode.

10. A computer for receiving a wireless signal while in a power-saving mode, said computer comprising:

a receiving means adapted to detect a wireless signal representing a sequence of bits, wherein said receiving means is adapted to regenerate some or all of said bit sequence, wherein said wireless signal is targeted for said computer;

a power-saving mode control means adapted to exit said power-saving mode in response to a detection of said wireless signal when said computer is in said power-saving mode;

a switch for enabling power to said receiving means when said computer is in said power-saving mode; and

a memory for storing said some or all of said regenerated bit sequence after said computer has exited said power-saving mode.

11. The computer of claim 10, further includes:

one or more status indicators for indicating whether said receiving means is installed and enabled; and

wherein said power-saving mode control is adapted to exit said power-saving mode, only if said one or more status indicators show that said receiving means is installed and enabled.

12. cancelled

13. cancelled

14. The computer of claim 10, wherein said receiving means is an optional attachment to said computer.

15. The computer of claim 10, wherein said receiving means is formed in a device bay cover.

16. The computer of claim 15, wherein said device bay cover is an optional attachment to said computer.

17. A computer, comprising:

a receiving means for receiving a signal representing a bit sequence;

a power saving mode selection means for selectively entering and exiting a power-saving mode; and

a detection means within said receiving means for detecting a wireless signal targeted for said computer while said computer is in a power-saving mode; and

a control means within said power saving mode selection means for exiting said power-saving mode in response to said detected wireless signal.

18. The computer of claim 17, further includes

means for disabling at least one power source when said computer is in said power-saving mode, wherein said receiving means asserts a wake up signal to said control means to indicate said detected wireless signal is targeted for said computer; and

a power management circuit to enable at least one power source, in response to said asserted wake up signal.

19. The computer of claim 17, wherein said receiving means is an option card coupled to said computer through an option card bus slot.